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CLAIMS

What is claimed is:

1. An error correction method for use with a noisy communication channel, said method comprising the steps of:

dividing a data stream into symbols;

sampling the divided data stream in threads, wherein samples are taken at fixed time intervals;

inserting a correction symbol into the data stream to mix the correction symbol with data symbols that have a fixed time separation;

transmitting the data stream;

receiving the transmitted data stream;

performing error detection and correction computations on the data and error correction symbols; and

outputting an error corrected data stream.

- 2. The method of Claim 1 wherein the bursty communication channel comprises a satellite communication link.
- 3. The method of Claim 1 wherein the bursty communication channel comprises a scratched compact disk.
- 4. The method of Claim 1 wherein the incoming data stream comprises symbols in the form of bits.
- 5. The method of Claim 1 wherein the incoming data stream comprises symbols in the form of bytes.
- 6. The method of Claim 1 wherein the incoming data stream comprises symbols in the form of words.
- 7. The method of Claim 1 wherein samples are taken at fixed time intervals that are longer than the time interval of the bursts of data.
- 8. The method of Claim 1 wherein the step of performing error detection and correction comprises performing cyclic redundancy check error correction.

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- 9. The method of Claim 1 wherein the step of inserting a correction symbol into the data stream comprises the step of inserting the same correction symbol is in more than one thread.
- 10. An error correction method for use with a noisy communication channel, said method comprising the steps of:

copying each data symbol that is to be transmitted onto a register;

placing each data symbol onto a transmit output buffer in a predetermined position, wherein positions between each data symbol are filled with error correcting symbols calculated after a register gets filled;

transmitting a symbol transmission stream from the transmit output buffer; receiving the transmitted transmission stream;

placing data and error correction symbols from the symbol transmission stream on predetermined registers;

performing error detection and correction computations on the data and error correction symbols;

placing the corrected data symbols on a receive output buffer in their correct positions; and

outputting an error corrected data/stream from the receive output buffer.

- 11. The method of Claim 10 wherein the bursty communication channel comprises a satellite communication link.
- 12. The method of Claim 10 wherein the bursty communication channel comprises a scratched compact disk.
- 13. The method of Claim 10 wherein the incoming data stream comprises symbols in the form of bits.
- 14. The method of Claim 10 wherein the incoming data stream comprises symbols in the form of bytes.
- 15. The method of Claim 10 wherein the incoming data stream comprises symbols in the form of words.
- 16. The method of Claim 10 wherein samples are taken at fixed time intervals that are longer than the time interval of the bursts of data.

- 17. The method of Claim 10 wherein the step of performing error detection and correction comprises performing cyclic redundancy check error correction.
- 18. The method of Claim 10 wherein the step of inserting a correction symbol into the data stream comprises the step of inserting the same correction symbol is in more than one thread.